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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/540,289	03/31/2000	Mitsuhiro Agehari	P/2041-47	9847

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EXAMINER

TRAN, KHANH C

ART UNIT	PAPER NUMBER
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2631

8

DATE MAILED: 04/09/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/540,289

Applicant(s)

AGEHARI, MITSUHIRO

Examiner

Khanh Tran

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 March 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 4 is/are rejected.
- 7) ☒ Claim(s) 3 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03/31/2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6. 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claims 1-2 and 4 are rejected under 35 U.S.C. 102(e) as being anticipated by Wolcott U.S. Patent 6,370,202 B1.

Regarding claim 1, Wolcott invention is directed to a self-selective multi-rate transmitter that processes variable input rate data using a plurality of single input, multiple output inter-leavers. Figure 1 illustrates an embodiment of a self-selective multi-rate transmitter comprising two single-input, multiple-output (SIMO) inter-leaver 11 that accepts input data at an input rate of R_d bits per second and an input clock from outside. Hence, the SIMO inter-leaver 11 functions as a data processor as in the claim. The modulation section comprises a forward error correction circuit 12, a vector modulator 13, and an up-converter 14. The forward error correction circuit 12, representing coding means as claimed in the application, receives n parallel output from the SIMO inter-leaver 11 and implement a coding scheme in such a way to produce n parallel channels of coded data. The combination of the vector modulator 13 and the up-converter 14, represents transmission means as in the claim.

Regarding claim 2, figure 2 shows a plurality of parallel registers of L bits in the SIMO inter-leaver 11 for storing input data and parallel outputs of the SIMO inter-leaver 11 are clocked at a fixed rate, R_u , as uncoded k-bit symbols. Inherently, the uncoded k-bit symbols must be buffered before inputting to the forward error correction circuit 12.

Regarding claim 4, referring back to figure 1 again, the modulation section 20 comprises a forward error correction circuit 12, a vector modulator 13, and an up-converter 14. Even though Wolcott teachings do not show a transmission control means for generating a timing clock, inherently, such transmission control means exist to transmit modulation data at a clock timing. Wolcot further teaches that clock rates in the modulation section 20 are independent of the input data rate.

Allowable Subject Matter

2. Claim 3 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Drawings

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "data discrimination circuit for discriminating bits *corresponding to the coded data outputted*

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from said puncture circuit" must be shown or the feature(s) canceled from the claim(s).

No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Decker et al. U.S. Patent 4,980,897 discloses multi-channel Trellis encoder/decoder.

Murayama et al. U.S. Patent 6,233,711 B1 discloses turbo coding, decoding devices and turbo coding, decoding methods.

Ikeda et al. U.S. Patent 5,691,995 discloses transmission of data by using convolutional coding of different code rates and the encoded data reception including decoding of received data.

Ziemer et al. U.S. Patent 6,122,310 discloses method and apparatus for facilitating multi-rate data transmission by selecting a plurality of spreading codes.


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5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khanh Tran whose telephone number is 703-305-2384. The examiner can normally be reached on Tuesday - Friday from 08:00 AM - 05:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on 703-305-4378. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3800.

KCT
April 4, 2003


CHI PHAM
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600 4/7/03